

**CLAIMS**

1. In a wireless communication system having a base station controller and a  
2 plurality of base stations, a method comprising:  
segmenting a message into a plurality of segments;  
4 dividing the segments into a plurality of fragments; and  
transmitting the fragments.
2. The method as in claim 1, further comprising:  
2 retransmitting one of the plurality of fragments.
3. The method as in claim 1, further comprising:  
2 applying a segment parameter to each segment.
4. The method as in claim 1, further comprising:  
2 applying a segment indicator to each fragment.
5. In a wireless communication system having a base station controller and a  
2 plurality of base stations, a base station, comprising:  
means for building segments of a message from a plurality of transmitted  
4 frames;  
means for identifying a missing segment of the message; and  
6 means for requesting a retransmission of the missing segment.
6. The base station as in claim 5, further comprising:  
2 means for segmenting a message to form a plurality of segments;  
means for fragmenting the segments to form a plurality of fragments;  
4 means for transmitting the plurality of fragments; and  
means for retransmitting one of the plurality of fragments.
7. A method for receiving transmissions in a wireless communication system,  
2 comprising:

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4 receiving a transmission frame having a plurality of segments, each  
 4 segment having a plurality of fragments;  
 determining if any of the plurality of segments is missing;  
 6 if no segment is missing, reconstructing the message; and  
 if a segment is missing, requesting retransmission of the missing  
 8 segment.

8. The method as in claim 7, further comprising:  
 2 processing fragments of the transmission frame.

9. The method as in claim 7, further comprising:  
 2 determining an end of a segment; and  
 reconstructing the segment.

10. The method as in claim 7, further comprising:  
 2 if a segment is missing, sending a negative acknowledge message to the  
 transmitter of the transmission frame.

11. The method as in claim 7, further comprising:  
 2 if no segment is missing, sending an acknowledge message to the  
 transmitter of the transmission frame.

12. The method as in claim 7, further comprising:  
 2 determining a start of a segment; and  
 storing information in a buffer from the start of the segment.

13. The method as in claim 12, further comprising:  
 2 if the buffer is not empty at the start of a segment, flushing the buffer.

14. The method as in claim 13, further comprising:  
 2 if a fragment is not a start of segment and the buffer is empty, marking  
 the fragment as missing.

15. A wireless apparatus, comprising:

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2 receiver for receiving a plurality of transmission frames;  
3 segment extraction unit coupled to the fragment extraction unit, adapted  
4 to identify and reconstruct segments within a transmission frame;  
5 and  
6 message reconstruction unit coupled to the segment extraction unit,  
7 adapted to determine any missing segment within a message and  
8 to request retransmission of the missing segment.

16. A computer data signal embodied on a carrier wave, characterized by:  
a plurality of segments, each segment comprising:  
a segment parameter; and  
a plurality of fragments.

17. The computer data signal as in claim 16, wherein each of the fragments comprising:

segment identifier; and

an information portion.

18. The computer data signal as in claim 17, wherein the segment identifier indicates if segmentation is active for transmission of the computer data signal.

19. The computer data signal as in claim 16, wherein the segment error rate is given as:

$$SER=1-(1-FER)^x$$

4 wherein FER is a frame error rate of the computer data signal, and x is the number of fragments in the plurality of fragments.

20. The computer data signal as in claim 19, wherein the message error rate is given as:

$$\text{MER} = 1 - (1 - \text{SER})^k$$

4 wherein k is the number of segments in the plurality of segments.

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